



Environmental Stewardship Program

Kimball Office Furniture-Jasper

Success Story

Black Powder Reclamation

Background

Kimball Office-Jasper (KO-Jasper) is an office furniture manufacturer. The facility is located in Jasper, IN (Dubois County) and employs 373 Hoosiers. The facility has been an Environmental Stewardship Program (ESP) member since September 2010.

KO-Jasper offers over 40 different powder coat colors and manufactures furniture on a made to order basis. Manufacturing a broad assortment of products in various colors on a daily basis makes it difficult to schedule color transitions that would allow powder coat to be sprayed and reclaim the residual. KO-Jasper like many powder coat operations uses a spray-to-waste system. As the various colors that KO-Jasper uses are intermingled in the waste product, the color varies from collection to collection. In the past, powder coat overspray at the facility would be collected and sent either to a regional recycler or to landfill.

Project Implementation/Description

Over the years that KO-Jasper has been spraying powder coat, there have been periods where the facility has been forced to send waste material to the landfill due to recycler constraints. By 2012, KO-Jasper realized that they needed to increase the capacity of their powder coat operations and find a way to improve transfer efficiencies and reduce the quantity of powder coat materials sent off site.

Working with powder coat and equipment suppliers, KO-Jasper designed an automated powder coat line that provides the flexibility to spray a large number of colors every day and still allows the facility to reclaim the most popular color, interior black (I-B). The facility uses about 15,000 pounds annually of I-B. Identifying a means to reclaim the overspray of I-B would eliminate approximately 5,000 pounds of waste annually. The potential cost savings for material purchased is over \$9,000 annually, plus the cost of preparation and transportation to offsite vendors.

In order to spray I-B to reclaim, KO-Jasper designed an automated line that, after washing the parts, takes all parts first through a booth dedicated for I-B followed by a second larger booth that can spray all remaining colors. By placing a booth dedicated to I-B in the process first, the facility is able to keep the booth and any overspray within it from being contaminated by any other colors, thereby allowing it to be captured and re-used.

Although this design required an additional booth, conveyor, and floor space, above what was needed for capacity, KO-Jasper felt the investment was appropriate to reduce the amount of material being sent off site. With the finish line installed, additional work was completed to develop the processes to capture, sieve the overspray material and prepare it for re-introduction back into the process. The facility's process engineers were able to work with a local sheet metal fabricator to create a capture tray and filtering equipment to prepare the material for re-introduction to the spray process.



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Project/Activity Outcomes

KO-Jasper is monitoring the usage of the material on a weekly basis. They have found that since its start up March 1, 2013, KO-Jasper has been able to improve the process efficiency of I-B on the line to nearly 100 percent.

Long term, the process developed to recapture the overspray is flexible enough to transition to other colors. Therefore, if Kimball Office-Jasper were to receive a large project order for a single color or should their most popular color shift to a different color, they would still be able to implement the new process and reclaim the overspray.

Facility Contact

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